

**ASYMMETRIC ADAPTIVE MODULATION IN A WIRELESS  
COMMUNICATION SYSTEM**

Abstract of the Disclosure

On embodiment of the system and method provides asymmetric adaptive  
5 modulation which allows uplink and downlink subframes of data to be transmitted  
between a base station and a CPE with different modulation schemes, thus increasing  
the efficiency of downlink transmissions while maintaining the stability of uplink  
transmissions. In systems with multiple CPEs, each CPE and base station pair can  
10 independently select their uplink and downlink modulation techniques. The system and  
method are also adaptive in that they adjust the modulation schemes based on, for  
example, signal to noise ratio measurements or bit error rate measurements.

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